EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. J. Skarsten (reg. no. 28,346) on 5/19/08.

The application has been amended as follows:

Claim 2. A computer implemented method for selecting a class loader to load a plug-in class within a class loader hierarchy, the method comprising the steps of:

generating a class loader ~~heirarchy~~ hierarchy comprising a plurality of class loaders that includes two or more application class loaders, one for each of two or more application classes, wherein each of said application class loaders can selectively load its application class, or delegate the loading of its application class to another class loader of said class loader hierarchy;

providing a different plug-in class loader for each class loader of said class loader hierarchy, wherein each plug-in class loader is associated with only a single class loader of said hierarchy, and wherein each plug-in class loader is associated with the single class loader in that it delegates to its associated class loader;

identifying the class loader of said hierarchy that is used to load a specified one of said two or more application classes; ~~and~~

~~using the plug-in class loader that is associated with and delegates to said identified class loader to load a given plug-in class that is associated with said specified application class~~

configuring a first application class to load a first plug-in class using a target class, wherein the name of the target class is specified in a configuration file and the target class resides at a point at or below the application class in the application class loader hierarchy;

identifying a target class loader within the class loader hierarchy that loaded the target class;

identifying a plug-in class loader that is associated with and delegates to the target class loader; and

loading the first plug-in using the identified plug-in class loader.

Claims 8-9. (Canceled).

Claim 12. An apparatus including a processor for selecting a class loader to load a plug-in class within a class loader hierarchy, the apparatus comprising:

means for generating a class loader hierarchy comprising a plurality of class loaders that includes two or more application class loaders, one ~~fore~~ for each of two or more application classes, wherein each of said application class loaders can selectively

load its application class, or delegate the loading of its application class to another class loader of said class loader hierarchy;

means for providing a different plug-in class loader for each class loader of said class loader hierarchy, wherein each plug-in class loader is associated with only a single class loader of said hierarchy, and each plug-in class loader delegates to its associated class loader;

means for identifying the class loader of said hierarchy that is used to load a specified one of said two or more application classes; ~~and~~

~~means for using the plug-in class loader that is associated with and delegates to said identified class loader to load a plug-in class that is associated with said specified application class~~

means for configuring a first application class to load a first plug-in class using a target class, wherein the name of the target class is specified in a configuration file and the target class resides at a point at or below the application class in the application class loader hierarchy;

means for identifying a target class loader within the class loader hierarchy that loaded the target class;

means for identifying a plug-in class loader that is associated with and delegates to the target class loader; and

means for loading the first plug-in using the identified plug-in class loader.

Claims 18-19. (Canceled).

Claim 20. Replace "The apparatus of claim 18" in line 1 with "The apparatus of claim 12".

Claims 22. A computer program product, in a recordable-type computer readable medium, for selecting a class loader to load a plug-in class within a class loader hierarchy, the computer program product comprising:

first instructions for generating a class loader hierarchy comprising a plurality of class loaders that includes two or more application class loaders, one for each of two or more application classes, wherein each of said application class loaders can selectively load its application class, or delegate the loading of its application class to another class loader of said class loader hierarchy;

second instructions for providing a different plug-in class loader for each class loader of said class loader hierarchy, wherein each plug-in class loader is associated with only a single class loader of said hierarchy, and each plug-in class loader delegates to its associated class loader; third instructions for identifying the class loader of said hierarchy that is used to load a specified one of said two or more application classes; and

~~fourth instructions for using the plug-in class loader that is associated with and delegates to said identified class loader to load a plug-in class that is associated with said specified application class~~

fourth instructions for configuring a first application class to load a first plug-in class using a target class, wherein the name of the target class is specified in a

configuration file and the target class resides at a point at or below the application class in the application class loader hierarchy;

fifth instructions for identifying a target class loader within the class loader hierarchy that loaded the target class, and identifying a plug-in class loader that is associated with and delegates to the target class loader; and

sixth instructions for loading the first plug-in using the identified plug-in class loader.

The following is an examiner's statement of reasons for allowance:

The closest prior art (US 2004/0015936 to Susarla et al. and US 2002/0184226 to Klicnik et al.) discloses a class loader hierarchy for loading plug-ins. However, the closest prior art does not teach or suggest loading a plug-in by "configuring a first application class to load a first plug-in ... specified in a configuration file" and subsequently "identifying a target class loader ... and identifying a plug-in class loader that is associated with and delegates to the target class loader".

Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571) 272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bullock Lewis can be reached on (571) 272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Mitchell/
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5/19/08

/Lewis A. Bullock, Jr./
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